

What is claimed is:

1. An acrylic copolymer composition comprising:

(A) 5-15 wt% of a crosslinking agent and an alkyl acrylate monomer constituting an alkyl acrylate crosslinked polymer;

(B) 55-90 wt% of methyl methacrylate; and

(C) 5-40 wt% of at least one monomer selected from the group consisting of an alkyl acrylate compound and an alkyl methacrylate compound.

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2. The acrylic copolymer composition of claim 1, wherein the alkyl acrylate crosslinked polymer has the degree of swelling of 3-10.

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3. The acrylic copolymer composition of claim 1, wherein the alkyl acrylate crosslinked polymer is prepared from the crosslinking agent and the alkyl acrylate compound.

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4. The acrylic copolymer composition of claim 3, wherein the crosslinking agent is selected from the group consisting of aryl methacrylate, trimethylolpropane, triacrylate, and divinylbenzene.

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5. The acrylic copolymer composition of claim 3, wherein the alkyl acrylate compound has a straight,

branched, or cyclic alkyl group of 1-18 carbon atoms.

6. The acrylic copolymer composition of claim 3,  
wherein the alkyl acrylate compound is one or more  
5 selected from the group consisting of methyl acrylate,  
ethyl acrylate, n-butyl acrylate, lauryl acrylate,  
stearyl acrylate, 2-ethylhexyl acrylate, and cyclohexyl  
acrylate.

10 7. The acrylic copolymer composition of claim 1,  
wherein in the monomer (C), the alkyl acrylate compound  
has a straight, branched, or cyclic alkyl group of 1-18  
carbon atoms and the alkyl methacrylate compound has a  
straight or cyclic alkyl group of 2-18 carbon atoms.

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8. The acrylic copolymer composition of claim 1,  
wherein in the monomer (C), the alkyl acrylate compound is  
one or more selected from the group consisting of methyl  
acrylate, ethyl acrylate, n-butyl acrylate, lauryl acrylate,  
20 stearyl acrylate, 2-ethylhexyl acrylate and cyclohexyl  
acrylate, and the alkyl methacrylate compound is one or  
more selected from the group consisting of n-butyl  
methacrylate, lauryl methacrylate, stearyl methacrylate,  
tridecyl methacrylate, i-butyl methacrylate, t-butyl  
25 methacrylate, 2-ethylhexyl methacrylate and cyclohexyl

methacrylate.

9. The acrylic copolymer composition of claim 1,  
which has a weight average molecular weight of 1,000,000  
5 to 12,000,000.

10. A method for preparing an acrylic copolymer,  
which comprises emulsion polymerization, suspension  
polymerization, or solution polymerization of 5-15 wt% of a  
10 crosslinking agent and an alkyl acrylate monomer  
constituting an alkyl acrylate crosslinked polymer having  
the degree of swelling of 3 to 10; 55-90 wt% of methyl  
methacrylate; and 5-30 wt% of at least one monomer selected  
from the group consisting of an alkyl acrylate compound  
15 with an alkyl group of 1-18 carbon atoms and an alkyl  
methacrylate compound with an alkyl group of 2-18 carbon  
atoms.

11. The method of claim 10, wherein the emulsion  
20 polymerization comprises:

(a) (i) mixing 5-15 wt% of the crosslinking agent and  
the alkyl acrylate monomer to prepare an emulsion  
containing the alkyl acrylate crosslinked polymer having  
the degree of swelling of 3 to 10 and adding 27.5-45 wt% of  
25 the methyl methacrylate, 2.5-20 wt% of the at least one

monomer selected from the group consisting of the alkyl acrylate compound with an alkyl group of 1-18 carbon atoms and the alkyl methacrylate compound with an alkyl group of 2-18 carbon atoms, an emulsifier, a polymerization  
5 initiator, and a redox catalyst, to the emulsion containing the alkyl acrylate crosslinked polymer or (ii) mixing 27.5-45 wt% of the methyl methacrylate, 2.5-20 wt% of the at least one monomer selected from the group consisting of the alkyl acrylate compound with an alkyl group of 1-18 carbon  
10 atoms and the alkyl methacrylate compound with an alkyl group of 2-18 carbon atoms, the emulsifier, the polymerization initiator, and the redox catalyst and adding 5-15 wt% of the crosslinking agent and the alkyl acrylate monomer to the mixture; and

15 (b) further adding 27.5-45 wt% of the methyl methacrylate, 2.5-20 wt% of the at least one monomer selected from the group consisting of the alkyl acrylate compound with an alkyl group of 1-18 carbon atoms and the alkyl methacrylate compound with an alkyl group of 2-18  
20 carbon atoms, the emulsifier, the polymerization initiator, and the redox catalyst, to the resultant mixture of step (a).

12. A vinyl chloride resin composition comprising a  
25 vinyl chloride resin and 0.1-20 parts by weight of an

acrylic copolymer prepared according to the method of claim 10, based on the 100 parts by weight of the vinyl chloride resin.

5        13. A vinyl chloride resin composition including a vinyl chloride resin and 1-30 parts by weight of a mixture comprising 5-30 wt% of an acrylic copolymer prepared according to the method of claim 10 and 70-95 wt% of an impact modifier, based on 100 parts by weight of the vinyl  
10 chloride resin.

14. The vinyl chloride resin composition of claim 13, wherein the impact modifier is selected from the group consisting of acrylonitrile-butadiene-styrene (ABS), methyl  
15 methacrylate-butadiene-styrene (MBS), and acrylic compounds.